

I-5 Skagit River Bridge - Permanent Bridge Replacment

RFP Questions and Answers # 3 - June 14, 2013

KEY: New/Updated



Question	RFP Reference	Question	Date Received	Response
1		Please confirm that number of piling in-water may be increased above 40 ea @ 30" diameter shown in the hpa? We propose 40 ea @24" dia. Plus 16 ea @ 16" dia. For a total of 56 temporary piling.	6/5/2013	WSDOT has received verbal approval from WDFW to install up to 65 pile and a modified HPA will be issued by WDFW
2		Please confirm with diking district/corps ,that it is permissible to disturb the armoring riprap just east & west of Pier 9? This disturbance is required to vbe in 6 ea.- 24" pipe piling at each location. Riprap around piling would be replaced the day following pile driving then restored to existing contours upon pile extaction.	6/5/2013	The diking district supports adjustment of the rip rap for piling installation, however it is their expectation that it be restored to a better or equal state upon completion of the work. An Army Corps of Engineers permit is not required for relocation of the rock, provided it is not removed from the river.
3		Please confirm that contractor will not be carrying any risk of the Acrow bridge suitability, safety, maintainance for the duration of the contract until the contractor initiates its removal.	6/5/2013	The Design-Builder will not be responsible for the ACROW bridge until the bridge is closed to traffic prior to it's removal and replacement by the permanent new structure. An adendum will be issued to address the transfer of the lease from WSDOT to the Design-Builder.
4	ITP 3.1.2	Does not mention a cover letter in the page count. Will a cover letter be allowed?	6/7/2013	A cover letter will be allow but is not needed. It will not be scored and should be limited to one page.
5	ITP 3.14	2) Price Proposal Section 4: "The Price Proposal shall be placed into a third sealed envelope clearly marked on the front as follows:" We understand the price proposal is to be sealed in an envelope, yet what gets sealed in the first and second envelopes?	6/7/2013	This will be clarified by Addendum
6	RFP 1-08.5(1).1	Is it necessary for the Utilities Owners to approve our design and construction before Substantial completion? The new conduit can be installed on the outside of the girders and connected to the existing conduit after the road is reopened.	6/7/2013	This will be clarified by Addendum, it will not be a requirement for substantial completion
7	RFP 2.13.1	Will WSDOT maintain the E&O risk for the ACROW bridge span? Will WSDOT maintain the responsibility for all rental costs and damage to the ACROW bridge span? We assume that the ACROW bridge span must be returned to ACROW's yard before Physical Completion.	6/7/2013	This will be clarified by Addendum
8	RFP 2.13.4.3.1	What are the dead load reactions of the original Span 8 that limit our new superstructure weight?	6/7/2013	This will be clarified by Addendum
9	RFP 2.13.3.1	Will there be a bond breaker between the ACROW deck and asphalt? Is the deck open grating? Allowable loads on existing bridge?	6/7/2013	The deck is not open grated. It is unknow if a bond breaker will be used at this time. For legal loads on the temporary span, refer to TR 2.13.3.8.

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10		What will the thickness of HMA that the contractor will be removing from the temporary bridge span?	6/7/2013	The bridge has been designed to accommodate a 3.5" overlay. The depth of HMA will vary to match the existing profiles and provide cross slope for drainage
11		Please provide the bathymetry of the river bottom in Span 8 and the river elevations for September 2013.	6/7/2013	An addendum will be issued that will include current bathymetric data only.
12		Please provide an as-built of the existing expansion joints that will be in place when the ACROW span is open to traffic.	6/7/2013	An addendum will be issued that will include the plan for the ACROW joints.
13		LW deck bulb tees does not seem consistent with a 50 year performance standard for this span.	6/11/2013	The structural lightweight aggregate as defined in RFP meets or exceeds a 50 year performance.
14		Design capacity and weight of a 160 ft concrete span notwithstanding, there are two performance issues with deck bulb tees at any span. The first is differential camber. The second is reflective cracking. These are the primary reasons why WSDOT's internal bridge standard practice and design software 'locks down' deck bulb tee applications at a 6 ft spacing, it appears that extending to a 7'6" spacing might be the preferred to keep the replacement structure as light as possible.	6/11/2013	Deck Bulb Tees could be designed for 160 feet span and 7'-6" flange. The reflective cracking is a concern specially when HMA overlay is used, which is not allowed in the RFP. We are requiring concrete overlay for this project, the thickness depends on which girder option is used. There are couple of way to minimize the reflective cracking: 1) use of UHPC for grout. The UHPC connection has been tested at the FHWA Lab in D.C. and used many projects in New York and elsewhere. 2) We could use a thin flange 7' 6" flange DBT with 5" CIP slab. Thin flange option is available in the WSDOT Bridge Design Manual.
15		Deck bulb tees are not a generally accepted design solution for long span interstate bridges for good reason. They are generally used for short spans on secondary roadways and County bridges. You are familiar with the approach to constructing typical girders with differential camber, which at a 160 ft span can be significant. Consider this same situation with a deck bulb tee where the precast deck sections butt up and connect with clips. The only solution is to thicken the overlay. The extreme prestress of this section for a 160 ft span with wide girder spacing and lightweight concrete (which has very little history in prestressed girders and not a great history in post-tensioned bridge girders) all makes this consideration more significant.	6/11/2013	Either the 1 1/2" concrete overlay with a 6' DBT flange, or the 7' 6" DBT flange with a 5" CIP slab address the differential camber concern. Please see above for other concerns.

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16		Deck bulb tees are not a generally accepted design solution for long span interstate bridges for good reason. They are generally used for short spans on secondary roadways and County bridges. You are familiar with the approach to constructing typical girders with differential camber, which at a 160 ft span can be significant. Consider this same situation with a deck bulb tee where the precast deck sections butt up and connect with clips. The only solution is to thicken the overlay. The extreme prestress of this section for a 160 ft span with wide girder spacing and lightweight concrete (which has very little history in prestressed girders and not a great history in post-tensioned bridge girders) all makes this consideration more significant.	6/11/2013	Please see above.
17		Reflective cracking stems from both the 'pre-crack' formed by the discontinuous deck, and the relatively flexible connection between the decks (all coupled with time-dependent concrete behavior). The former cannot be mitigated. There are designs with thick, reinforced overlays that seek to address the latter item with varying success. But in our experience, reflective cracking should be expected with the use of deck bulb tees (at any span).	6/11/2013	The connections could be designed and detailed for better performance. Use of CIP slab for the thinner flange eliminates/reduces the chance for reflective cracking.
18		What level of reflective cracking will be acceptable with the use of deck bulb tee girders?	6/11/2013	No crack is preferred. Otherwise, not more than the typical slab cracking that we see in other projects. Meet the curing requirements for the deck is a also a factor in cracking.
19		Will WSDOT will waive their standard limitation of 6 ft spacing for deck bulb tees? For instance if we use bulb tee's, wan the top flange be 7'6"?	6/11/2013	Yes, see above. A 5" CIP slab would be required per the BDM
20		What margin beyond the pre-approved design weight limit on the piers will be permitted for increased overlay weight to accommodate any differential camber with the use of deck bulb tees?	6/11/2013	This should have been answered with the addendum that included the dead load amount in the RFP?
21		What are the allowable reflective crack widths?	6/11/2013	We don't design for crack width. The reflecting cracking (if any) is over the life of the structure not at the initial design.
22		What are the maintenance responsibilities associated with reflective cracks and repair of the cracks?	6/11/2013	Same as other bridge decks.

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23		What are the acceptable differential camber limitations from girder to girder and for girders overall?	6/11/2013	Per STD Specs camber tolerance. The requirement for concrete overlay (or CIP Slab) addresses the concerns with the differential camber.
24		Please provide limits of pavement markings.	6/11/2013	Fifty to hundered feet on the north and south end of the bridge. The 12 foot existing lanes will be narrowed to 11 feet. Follow design standards. The plans are not developed yet.
25		Please define scope of project signage.	6/11/2013	It will consist of removing eight signs that communicate narrow bridge and the reduced speed limit on the temporary bridges and reinstallation of any pre-existing regulatory signs for speed limit after the NB and SB on ramps.
26		Please provide details of the existing bridge where the expansion joints are to about the structures. Does a water tight seal need to be established?	6/11/2013	The joints will need to be water tight as per the RFP. Details for how the temporary joint will be constructed are found in Addendum 3.
27		What is the weight of the ACROW spans?	6/11/2013	The weights can be calculated using the manual published in Appendix N1 in Addendum 3
28		What is the rental rate on the ACROW span materials?	6/11/2013	See Addendum 4 for a draft lease agreement with the lease amount.